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ABSTRACT

In December 1977, the Office of Environmental Education (OEE) brought its fiscal year '77 grant recipients together in Boulder, Colorado, for a technical assistance consultation. The technical assistance responsibilities of OEE are mandated by the Environmental Education Act. Until this consultation, OEE had been giving its technical assistance on a request basis. This meeting was its first effort to give technical assistance on a group basis. This publication details and summarizes this consultation meeting. The first of the three sections describes the basis for technical assistance and OEE practices. The second section explains the events leading to the Boulder consultation and the operations and evaluation of the meetings. The third section encompasses the responses to the consultation and recommendations for future technical assistance from OEE. An executive summary serves as an introduction to the publication. Consultation agenda and participants are included in the appendix. (MR)

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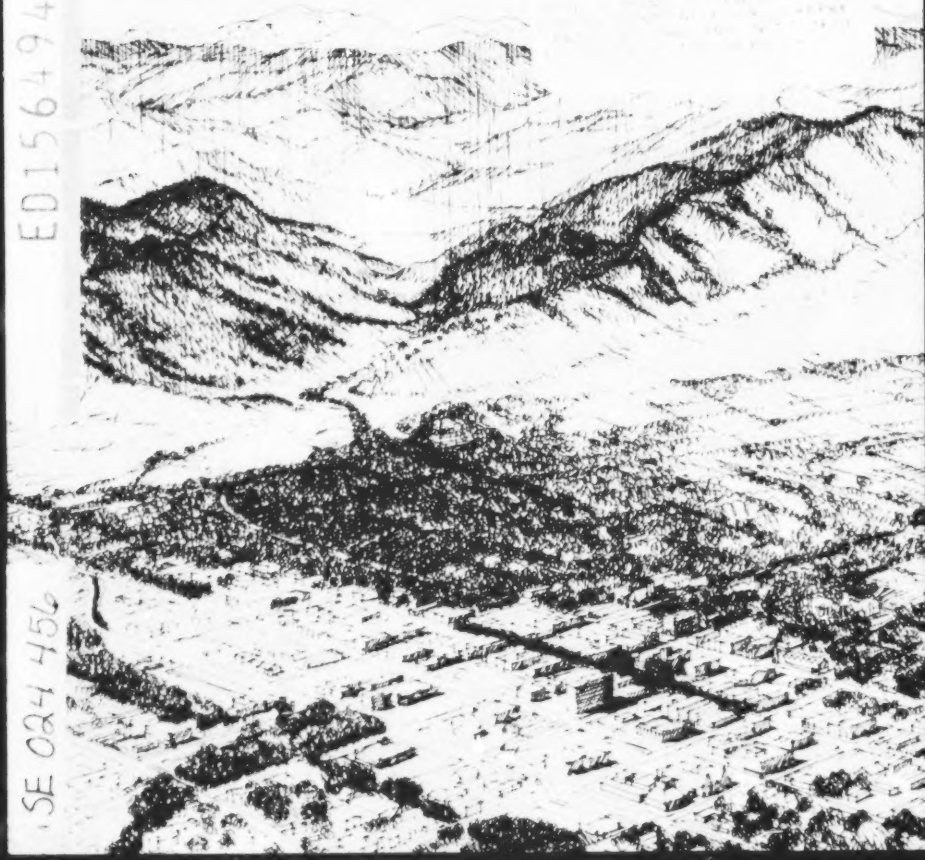
Results of the **BOULDER** Consultation

The beginnings of a technical assistance program

for the Office of Environmental Education / USOE / HEW

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION



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Boulder, Colorado (pop. 75,000), 30 miles northwest of Denver. Where the foothills of the Front Range of the Rockies meet the plains. (cover art: William Zmistowski, AIA)

Executive Summary

On December 11-13, 1977, the Office of Environmental Education (OEE) brought its fiscal year '77 grant recipients together in Boulder, Colorado for a technical assistance consultation. Thus, OEE undertook its first major effort to identify more effective mechanisms for technical assistance to its highly diversified grantee population. The Boulder Consultation used a group-based approach. Prior to this, technical assistance had been furnished to individuals and groups largely on a request-for-service basis.

The technical assistance responsibilities of the Office of Environmental Education are mandated by law. The Office has continually been concerned about its capacity to meet these responsibilities, and had set 1977 as its target date for the exploration and implementation of an effective and feasible technical assistance mechanism.

The Office of Environmental Education views technical assistance as a collaborative, problem-solving process, mutually beneficial to Program and projects. Drawing upon the skill and expertise which have developed within the field of environmental education, the Office has hoped to build a community of Inquiry that would be responsive to the Environmental Education Act in all its dimensions.

The Boulder Consultation was designed to test one alternative for enhancing the capabilities for implementing the Environmental Education Act. It offered grantees a medium for exploring project-related problems with OEE staff and resource personnel and for sharing ideas, information, resources and experience.

The Consultation was noteworthy in two respects. First, it demonstrated the validity of a group-based approach in treating the technical assistance needs of a complex and varied population. Second, it generated valuable ideas and insights which can now be used to improve and refine the approach to technical assistance and dissemination.

From the Boulder Consultation experience has grown the concept of an "Institute" as the next step in group-based, Program-practitioner interaction. The Institute is envisioned as an annual five-to-eight-day activity timed to coincide with the award of new grants and with the completion of projects from the previous year. It will treat orientation and technical assistance needs of new grantees, and debriefing and dissemination needs of completed project grantees.

The design of the Institute reflects the Boulder Consultation participants' urging for more time, more depth and more scope in order to answer their technical assistance needs.

The Office of Environmental Education is planning a working test of the Institute concept at the Xerox International Center for Training and Management Development, Leesburg, Virginia, September 17-24, 1978, to serve fiscal year '77 and fiscal year '78 project grantees. This Institute is a direct and meaningful outgrowth of the extraordinary amount of groundwork laid by the participants in the Boulder Consultation, described in the pages to follow.

(photo: Geoffrey Studios Wheeler Photography, Boulder)

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The National Center for Atmospheric Research on the mesa at Boulder (photo: NCAR).

SECTION ONE: Technical Assistance

Basis for Technical Assistance

"The Secretary of Health, Education and Welfare, in cooperation with the heads of other agencies with relevant jurisdiction, shall, insofar as practicable upon request, render technical assistance to local educational agencies, public and private non-profit organizations, institutions of higher education, agencies of local, state and federal governments, and other agencies deemed by the Secretary to play a role in preserving and enhancing environmental quality and maintaining ecological balance. The technical assistance shall be designed to enable the recipient agency to carry on education programs which are related to environmental quality and ecological balance".

Public Law 91-516, (1970) as amended by P.L. 93-278 (1974)
The Environmental Education Act

The responsibility of the Office of Environmental Education to provide technical assistance is mandated by the Environmental Education Act of 1970. Fulfillment of this responsibility is compounded by the scope, complexity, and uncharted nature of environmental education.

As one might suspect, the wide range of projects concerned with environmental quality and ecological balance gives rise to an enormously diverse array of technical assistance needs. The problem becomes one of organizing this variety into a manageable framework. This report uses the stages of the grants process as a framework in order to offer the reader some understanding of technical assistance needs during the life of a project.

Stage One: Planning the Project

Technical assistance needs begin with the design of a project. These needs are demonstrated most graphically by weaknesses in the proposals received.

Too few program plans evidence a clear understanding of, and a responsiveness to, the Environmental Education Act and the Program Regulations.

Stage Two: Project Operations

The second stage for technical assistance begins with award notification and extends through the duration of the project. It is characterized by needs for guidance in the following areas:

project management, including reporting, record-keeping, review and revision, scheduling, decision-making, and staff coordination;

development of environmental education objectives and how to hold to these objectives despite newly-emerging and equally urgent problems and issues;

identification, coordination, and organization of human and information resources in the community;

resolution of the problems of environmental practice and program development;

identification of validated models of counterpart environmental education activities and approaches;

adherence to the intent of the Environmental Education Act; and,

keeping abreast of new trends, ideas, information and practice.

Stage Three: Assessment / Evaluation and Dissemination

Finally, technical assistance needs extend to the concluding phase of a project. Here, two needs predominate. The first is the need for assessment, to determine whether the project has met its objectives and whether its efforts have contributed to the field of environmental education. The second is the need for dissemination which can include tasks ranging from publication to limited distribution to very elaborate validation-replication steps with continuing dissemination efforts. There is uncertainty and confusion as to how to define these responsibilities as well as how to operationalize them, both of which might be remedied by technical assistance.

Office of Environmental Education Practice

The technical assistance program of the Office of Environmental Education is concerned primarily with helping persons, institutions, and communities involved in environmental education activities to identify and make use of resources and expertise available to them locally or from other sources. Generally, this aspect of the Office of Environmental Education's Program does not include direct funding to local projects. Rather, the services of technical assistance teams or individuals located throughout the country will be provided upon request, subject to environmental education priority needs.

Rules and Regulations Governing Administration of the Environmental Education Act
Federal Register, Vol. 39, No. 79, May, 1974, p. C5 (20 U.S.C. 1532) (6) (A) IV, Sec. 3

The Office of Environmental Education has heretofore responded to technical assistance requirements largely on a

year-to-year basis, depending on resources available. These services have been rendered to a) funded projects and occasional pre-proposal planners, b) national associations and organizations with a primary environmental education mission, and c) individual practitioners and state coordinators. From its inception in 1971, the small staff of the Office has monitored projects with great interest, continuously solicited information about obstacles facing practitioners, and encouraged innovation and field testing of fresh ideas.

Over the past seven years, the Office has grown in its capacity to offer significant assistance. Until now, it would have been premature to develop a formalized outreach program, or to enlist service personnel for such a program. A solid experience base was first required.

The seven-year history of involvement with practitioners has now afforded the staff a clearer knowledge of how environmental education is practiced in communities and institutions throughout the country. Organization of several contractual efforts to design and develop frameworks, systems, and models, through which locally perceived needs could be more adequately met, has further strengthened the Office's delivery capabilities. The cumulative experience has equipped the staff with a solid base from which to effectively proceed in serving environmental education practitioners.

The Downtown Boulder Mall, opened August 6, 1977
(Design Team: Everett / Zeigel Associates
and Communication Arts, Inc., of Boulder;
Sasaki Associates, Inc., of Watertown, Mass.;
photo: Everett / Zeigel Associates)

SECTION TWO: The Boulder Consultation

Organizing the Consultation

The year 1977 was seen as the target date for the initiation of more structured technical assistance in the development of projects, the management of projects, and the design of meaningful assessment / evaluation and dissemination techniques.

In July of 1977, Walter Bogan, Director of the Office of Environmental Education, convened an advisory group of experienced practitioners and resource people in Washington, D.C., to explore and formulate mechanisms for advancing technical assistance within the scope of the responsibilities and capabilities of the Office. Discussion stressed a) the need for a community-building experience to deepen a sense of commonality and purpose among environmental educators,

b) the need to confront the difficulties of responding to so diverse a body of projects and project concerns, and c) the need to pinpoint those approaches and methods which could treat technical assistance and dissemination in a more direct, comprehensive and effective way. A group consultation emerged as a means by which the above needs might best be met.

In October, 1977, the advisory group was brought together again in Chicago to determine precisely the specific objectives and logistical requirements of such an approach. The decision was made to test the concept of a technical assistance consultation with the eighty-eight fiscal year '77 grant recipients. The University of Colorado in Boulder was chosen as the site for the activity and a December date set. The Chicago deliberations guided the preliminary design of the Consultation.

The Consultation was designed to be responsive to the aims of the OEE Program as well as to the needs of project grantees. The aims of the Program were outlined as follows:

a. to identify and further clarify the technical assistance needs of the projects;

b. to provide specific and grantee-requested technical services;

c. to encourage sharing of information, concerns, and opportunities among the Office and project personnel;

d. to contribute to the building of a professional community; and,

e. to determine the merit of the Consultation as an approach to technical assistance, and to explore its requirements and options.

On the basis of past Program experience, grantee needs were anticipated as being:

a. to explore ideas and approaches with other grantees, particularly with those involved in counterpart efforts;

b. to receive guidance from the Office of Environmental Education; and

c. to receive assistance in specific areas of technical concern.

Late in October, representatives from each of the funded fiscal year '77 projects were invited to attend the upcoming Consultation and asked to complete a project card indicating their immediate interests and concerns and abstracting their project objectives and activities.

These cards provided information that was used to ensure a Consultation design responsive to the needs of participants as well as to acquaint grantees with other projects. A structure was developed which allowed grantees to choose from several options: technical training, issue-oriented discussion, idea-sharing, and open time to meet with the Director and resource staff.

A resource staff was enlisted to guide participants in the problem-solving and network-building which was to occur. Staff were chosen to represent a variety of disciplines and backgrounds in keeping with the interdisciplinary character of environmental education. They were selected on the basis of demonstrated knowledge, expertise and skill in their areas of concentration and environmental education, their understanding of and commitment to a holistic, systems-based approach to environmental education, past project experience, and a full understanding of and commitment to the purposes of the Environmental Education Act.

Resource materials dealing with general technical assistance topics were prepared for use at the Consultation sessions.

Finally, the eighty-eight project cards received from the grantees were reproduced in decks and mailed to participants prior to the Consultation as a first step in building a sense of community among project grantees. With the cards were included plans for the structure of the Consultation.

The Operation of the Consultation

On December 10 and 11, Consultation staff met in a pre-

Consultation orientation, training, and planning session in Boulder. Staff reviewed and refined the Consultation structure that had been developed in previous weeks. The final structure consisted of the following types of sessions:

technical training sessions
in which participants receive formal training based on specific technical assistance materials prepared prior to the Consultation;

project assistance sessions
in which staff members interact with grantees to provide assistance on specific project-related problems and needs;

cluster / forum sessions
in which participants who shared common interests cluster in groups to exchange ideas and project experiences; and,

individual consultation
in which participants meet with staff on a one-to-one basis to deal with specific concerns.

To assure that this structure would be responsive to participants' needs, the Consultation staff planned a first day interest survey to allow participants to indicate the topics they were most interested in having addressed and the session format they wished to use to explore the topic. The final number and types of session offerings were determined on the basis of survey responses.

In addition, opportunities for feedback were built into the schedule at frequent intervals, so that new requests could be accommodated as they arose.

The pre-Consultation planning session was instrumental in building deep personal commitments among staff, which laid a foundation that was vital to the success of the Consultation.

Formal Consultation activities began with the arrival of grantees on the afternoon of December 11, and ran through December 13. Sessions resulting from the participant interest survey requests included eight technical training sessions, six

project assistance sessions, and eight cluster / forum sessions. Topics addressed are detailed in the Schedule of Events. (See Appendix.)

Sessions were interspersed with field visits to environmental education sites in the Boulder area. A plenary feedback session on Monday evening pointed to a need for longer sessions, more information on the OEE Program, its history and future plans, information on procurement, and more opportunities for individual consultation and discussion among small interest groups. Monday evening's and Tuesday's agenda reflected that input.

The sessions were conducted informally, emphasizing the mutual investment all participants had in gleaning assistance from each other, based on their different experience.

Evaluating the Consultation

For the majority of Boulder participants, the stated goals of the Consultation were realized, particularly the goal of information- and idea-sharing.

Overall, the Consultation's group-based approach to technical assistance was deemed valuable. Participants found it especially beneficial in several respects. First, the Consultation offered participants an opportunity to interact with the Office of Environmental Education staff and, in turn, to improve their understanding of the OEE Program. For many, one of the most important aspects of the Consultation was this interaction and the effect it had in "humanizing" the Program. Second, participants found the contact with other grantees and resource people to be useful in providing them with new insights and information. Third, the sessions on project management, evaluation, community outreach and land use were found to be particularly meaningful.

Many participants anticipated that the insights gained at the Consultation would have an impact on their projects by improving project planning and organization, approaches and methods used, and perspectives. However, some felt that their projects were too advanced to permit change.

In addition to the benefits derived from the Consultation, participants identified a number of ways in which they could be more effectively served within the group-based technical assistance framework.

It was suggested that the content and formats used during the Consultation be expanded. Participants felt that more examples of model approaches, more resource materials, and more in-depth treatment of topics would be useful. They also indicated it would be helpful if there were more time allowed for each session, more opportunities for individual help from resource people, more clusters of small interest groups, and more free time for sharing of experiences among participants. Finally, participants indicated a desire for opportunities for guidance on dissemination.

Colorado Daily

Ninety project directors from throughout the United States and Puerto Rico, who together have received more than $3 million in grants for the 1977-78 fiscal year, met this week for the Environmental Education Consultation.

The meeting was sponsored by the University's College of Environmental Design and the U.S. Department of Health, Education and Welfare's Office of Environmental Education (OEE) in cooperation with the University Division of Continuing Education Bureau of Conferences and Institutes.

The purpose of the consultation was to provide the directors with technical advice and assistance in carrying out their projects to make the projects more effective and useful to the citizens of the nation, according to Prof. Spenser Havlick of environmental design.

Havlick was co-chairman of the event with Walter Regan, director of the OEE. Subjects covered included land use planning, teacher training, energy efficiency and curriculum design.

Participants also visited portions of the Boulder campus and community in view of environmental education efforts such as Eco-Cycle, the University Mountain View Center and the National Center for Atmospheric Research.

Havlick said those attending included a wide range of environmental interests, ranging from the Audubon Society to a group of Navajo Indians to secondary school teachers.

SECTION THREE:
Response to the Boulder Consultation

The Institute Concept

Two themes were salient in the feedback elicited from participants at the Boulder Consultation. First, grantees felt it would be most helpful to schedule a technical assistance gathering soon after grants have been awarded for the fiscal year. Secondly, they felt they wanted more of everything offered—more time in sessions, more of each type of session, more in-depth information, more resource material, more discussions with OEE staff, and more free time for informal exchange.

Added to this was the staff's feeling that the group-based approach may have merit as a vehicle for dealing with

dissemination as well as technical assistance needs.

In response to these conclusions, the concept of the Institute has evolved as a five-to-eight day activity timed shortly after annual grants are awarded, for orientation and technical assistance, and shortly after projects are completed for dissemination and debriefing. Such an Institute would allow a more expanded and in-depth treatment of grantee needs. In addition, by bringing together new and former grantees, the Institute would allow each class of grantees to benefit from the other.

The Office of Environmental Education is planning a working test of the Institute concept in September, 1978, to serve fiscal year '77 and fiscal year '78 grantees. The philosophy, content and organization of the Institute will be greatly influenced by the ideas and recommendations which came out of the experience of the Boulder Consultation. Some of these are detailed in this section.

Recommendations for Technical Assistance

Philosophy and Approach

The experience of Boulder has indicated that omnibus technical servicing can be much more effective in meeting areas of need which are commonly shared, such as project management and assessment / evaluation, than it can in meeting the specialized needs of diversified segments of the environmental education community and the specific needs of individual projects. It was made clear that the specialized needs of community education representatives and formal education representatives must be addressed in different ways. Even within segments, needs differ significantly, e.g., priorities among elementary, secondary, and higher education sub-segments of formal education vary widely, as do priorities among sub-segments of community educators. The Institute will give more attention to tailoring technical assistance efforts to such segments. It was also apparent at Boulder that there are some needs which are unique to individual projects and may not be shared by other members of the environmental education community. The Institute will

place more emphasis on dealing with such specific project needs.

At another level, grantees' needs vary in proportion to differences in degrees of awareness, experience, skill and familiarity with environmental education practice. Recognition of the extent of those differences at Boulder has enabled Institute planners to determine to what degree the Institute can speak to each level of need.

Besides taking into account the importance of additional areas of grantee needs, future activities must continue to take into account the importance of Program needs. Technical assistance should be viewed not only as a way of responding to grantee concerns but also as an opportunity for improving long range Program functions, identifying expertise, encouraging leadership within the environmental education community, and helping to build responsiveness to the holistic, interdisciplinary, systems-based objectives of the Act itself.

In brief, technical assistance efforts must respond to the varying levels of need of their beneficiaries as well as encourage those participants to expand their own capabilities and professional goals.

Resource Personnel

The importance of the role played by resource personnel in facilitating the interactive process cannot be underestimated. The Boulder experience has indicated several ways in which this role can be expanded. One is by utilizing resource personnel to focus on the specific needs of individual projects. This can be done by assigning individual resource persons a number of hours for direct assistance to grantees on a one-to-one basis.

Outstanding resource personnel as identified at the Boulder Consultation will be utilized in the design of Institute sessions and the identification and preparation of resource materials. A team approach to these activities seems most desirable.

Session Formats

Institutes will afford an opportunity to experiment with a number of session formats. Those used successfully at Boulder are to be refined and implemented again. The concept of multiple service tracks will be expanded. It was the consensus of the Boulder participants that fewer choices should be offered among sessions based on common needs, with a broader array of options among interest groupings.

Formats to be considered for future gatherings include:

formal short courses, presenting content through models of practice;

structured learning events, using case studies from previous projects to demonstrate problem resolution and exemplar practice;

direct individualized help to project personnel based on their problems and interests;

self-help and sharing among project personnel; and,

unstructured time available for exchange and communication among resource personnel and project representatives.

Sessions will be identified as "introductory," "fundamental," "technical," or "specialized" to guide participants in their selection of workshops.

A major attribute of the Boulder Consultation was its flexible format which made it possible to respond to the suggestions of attendees during the course of the event. While the Institute should be structured enough to maintain direction and momentum for participants, it must still allow adjustments based on evaluation and feedback.

Materials

The Boulder experience pointed up the need for a wide variety of technical assistance materials. Early dissemination

of these materials is useful to equip participants with guides and information which can contribute to the richness and depth of exchanges.

Categories of resource materials to be considered include:

OEE Program Publications;

topic and issue-related handouts;

training units; and,

case study guides illustrating demonstration models.

Demonstration models might be explored for:

regional environmental education service systems;

state-based environmental education constructs;

community-oriented environmental education service methods;

university environmental education;

curriculum approaches;

materials preparation approaches; and,

teacher-training.

In Conclusion

As with all efforts, the Boulder Consultation had its weaknesses as well as its strengths. But it resulted in new insights and ideas which led to the concept of the Institute. Other activities will carry the technical assistance efforts further.

The Boulder Consultation may be considered a genesis. It successfully introduced technical assistance as a process through which a community of practitioners can learn from itself. The responsibility was shared and welcomed.

APPENDIX

Boulder Consultation Schedule of Events

Saturday, December 10

8:00 a.m. - 8:00 p.m.	Staff Planning & Orientation Session

Sunday, December 11

8:00 a.m. - 4:00 p.m.	Staffing Planning & Orientation Session
4:00 - 5:30 p.m.	Registration and Social Hour Creation of "Grantee Gallery"
7:00 - 7:30 p.m.	Welcome: Walter Bogan, Director, Office of Environmental Education, Introduction of Consultation Staff
7:30 - 9:00 p.m.	Participant Introductions and Session Sign-up in Groups By Funding Category
9:00 p.m.	Films
10:00 p.m.	Staff Planning Session

Monday, December 12

8:00 - 9:00 a.m.	Plenary
9:00 - 10:00 a.m.	Work Sessions
	Project Management: Technical Training Walter Bogan, Ronald Klietsch
	Resources and Information: Project Assistance Michael Schechtman, John Warfield, Spenser Havlick, King Kryger
	Community Outreach Strategies: Project Assistance Angela Rooney, William Ewald, Gordon Enk
	Assessment and Evaluation: Technical Training David Kennedy, William Hammond Bela Banathy
	Curriculum & Instruction: Technical Training John Miller
10:15 a.m. - 12:00 p.m.	Work Sessions
	Regional Focus: Project Assistance William Ewald, Gordon Enk, David Kennedy, John Miller
	Evaluation / Assessment: Technical Training Ronald Klietsch

	Materials Design: Technical Training King Kryger, John Warfield, Bela Banathy
	Land Use: Cluster / Forum Larry Peterson, Spenser Havlick, William Ewald
	Environmental Action / Life Skills: Project Assistance Angela Rooney, William Hammond, Michael Schechtman
12:00 - 2:30 p.m.	Lunch / Field Trips
2:30 - 4:00 p.m.	Work Sessions:
	Resource Finding: Technical Training Ronald Klietsch
	Project Management: Project Assistance Bela Banathy, John Warfield, Walter Bogan, George Coates
	Land Use: Cluster / Forum William Ewald, Spenser Havlick, Larry Peterson
	Environmental Action / Life Skills: Project Assistance Angela Rooney, William Hammond, Michael Schechtman
	Energy: Cluster / Forum King Kryger, Gordon Enk, John Warfield
4:00 - 5:30 p.m.	Plenary Review Session Feedback from participants regarding Monday's activities. Planning for Monday night and Tuesday evening activities.
7:30 - 9:00 p.m.	Background on the Office of Environmental Education: Walter Bogan, Director Office of Environmental Education
9:00 p.m.	Films
9:00 p.m.	Rap Session: Walter Bogan, Director Office of Environmental Education

Tuesday, December 13

8:30 - 9:00 a.m.	Schedule Review

9:00 - 10:30 a.m.	Work Sessions:
	Curriculum & Instructional Strategies: Project Assistance William Ewald, King Kryger, William Hammond
	Energy: Cluster / Forum Larry Peterson, Gordon Enk, Angela Rooney, John Warfield
	Water: Cluster / Forum John Warfield, Spenser Havlick, Michael Schechtman
	Instructional Objectives & Learning Strategies: Technical Training Ronald Klietsch, John Miller
	Materials Design: Technical Training William Hammond, David Kennedy, Bela Banathy
10:45 a.m. - 1:00 p.m.	Media / Films
	Selected Environmental Topics Larry Peterson
	Self-Selected Groups
1:00 - 1:30 p.m.	Grants / Contracts George Coates, Contracting Officer, U.S. Office of Education
1:30 - 3:00 p.m.	Work Sessions:
	Assessment / Evaluation: Project Assistance Bela Banathy, William Hammond, David Kennedy, John Warfield
	Environmental Education - Urban Context Cluster / Forum Spenser Havlick, Larry Peterson, William Ewald, King Kryger
	Individual Consultations
3:15 - 4:00 p.m.	"How to" Sessions by Participants
	Staff Consultation
4:15 - 5:00 p.m.	Consultation Wrap-up: Walter Bogan, Director Office of Environmental Education

Boulder Consultation Technical Assistance Materials

Drafts of technical assistance materials on the following subjects were prepared for the Boulder Consultation and are available from the Office of Environmental Education upon request:

Facilitator's Manual

Project Management

Project Management Problems

Assessment, Evaluation & Testing: Design Options & Approaches to Environmental Education

Environmental Education Objectives: Preparation of Instructional / Learning Objectives

Instructional Strategies & Learning Modes

Finding & Organizing Resources, Information & Content for Environmental Education Contexts

Teacher Training & Professional Development: Approaches & Settings

Environmental Education & Formal Classroom Settings

Unit Design and Development

Module Design and Development

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